

Abstract

Background: Clonidine has been used as an adjuvant to local anesthetic to extend the duration of block. The present study was aimed to compare the onset and duration of sensory and motor blockade of 0.75% ropivacaine alone or in combination with clonidine during ultrasound guided supraclavicular brachial plexus block for upper extremity surgeries under tourniquet.

Methods: Sixty four adult American society of anaesthesiologist grade 1 and 2 patients, scheduled for upper extremity surgeries were randomized to receive either 19.8 ml of 0.75% ropivacaine with 0.2 ml of normal saline (Group R) or 0.2 ml (30 mcg) of clonidine (Group RC) in supraclavicular block. Onset and duration of sensory and motor blockade was compared. The hemodynamic variability, respiratory adequacy and other adverse effects were also recorded.

Results: Ultrasound helped to visualize the nerves, needle and spread of local anaesthetic at the brachial plexus block site. The onset and duration of sensory and motor block was faster in Group RC than Group R. The duration of analgesia was prolonged in Group RC (14.1 ± 0.6 hrs) than Group R (9.4 ± 0.5 hrs). No complication of technique or adverse effects of ropivacaine and clonidine was reported.

Conclusion: Clonidine as an adjuvant to ropivacaine for ultrasound guided supraclavicular brachial plexus block enhanced duration of analgesia. There was no incidence of vessel puncture or pneumothorax.

Key words: Clonidine, ropivacaine, supraclavicular block, ultrasound